ELSEVIER

Contents lists available at SciVerse ScienceDirect

Journal of Forensic and Legal Medicine

journal homepage: www.elsevier.com/locate/jflm



An analysis of the murder of women in a 10-year period in Eskişehir Province located in western Anatolia in Turkey



Kenan Karbeyaz, MD, Medical Doctor, Eskisehir Branch Manager ^{a,*}, Harun Akkaya, MD, Medical Doctor ^b, Yasemin Balci, MD, Professor ^c

- ^a Council of Forensic Medicine, Eskisehir, Turkey
- ^b Council of Forensic Medicine, Istanbul, Turkey
- ^c Mugla Sitki Kocman University, Faculty of Medicine, Department of Forensic Medicine, Mugla/Muğla Province, Turkey

ARTICLE INFO

Article history:
Received 9 November 2012
Received in revised form
18 March 2013
Accepted 19 April 2013
Available online 28 May 2013

Keywords: Women Murder Autopsy

ABSTRACT

Murder of women generally occurs as a result of violence by their husbands and relatives. We evaluated the female victims of murder in Eskişehir, located in western Anatolia, where the education level is high in this study. Our aim was to assess and discuss data related to the victims and murderers.

A total of 141 women's murder cases were analysed in the study. After a legal process and the results of the autopsies during 2002–2011 in Eskişehir, 715 subjects found to have died as a result of murder were chosen. Cases were evaluated in terms of their age, marital status, education level, relationship to the murderer, reasons for violence, type of action and reasons for death.

It was determined that 48.2% (n = 68) of the victims had been killed by the husband and 7.8% (n = 11) by the ex-husband. Murderers generally stated that the reason of murder was the woman's request for divorce or breaking up (n = 40, 28.4%).

In compliance with the literature, the women were most commonly killed by their husbands in our study. Enhancing women's status and preventing violence against women will decrease such murders.

© 2013 Elsevier Ltd and Faculty of Forensic and Legal Medicine. All rights reserved.

1. Introduction

In comparison to women, men, in general, are murdered due to wars, conflicts and fights. ¹⁻⁴ On the other hand, women are generally murdered by violence. Women are mostly murdered by their husbands and relatives. ⁵⁻¹⁰ Violence against women is a global public health problem. ¹¹ It is reported that one in every three women in the world is exposed to violence by the relatives or husband at least once. ¹² It has been reported that 30% of the women in developing countries are exposed to domestic violence. ¹⁴ Women are exposed to violence by their husbands or relatives all around the world and in particular in countries with stricter religious beliefs. They are generally murdered without a reason. Murderers simply justify the action as tradition or a religious belief. ^{15,16} It is reported that 119,000 women were murdered in 2000 and 70% of were killed by their husbands, ex-husbands or boyfriends. ^{5,17}

Society ignores domestic violence and accepts it as a natural phenomenon except for serious injuries, causing domestic violence to continue. Women do not report domestic violence to the legal authorities, particularly in underdeveloped countries. However, violence sometimes results in the woman's death. 8,9,14

Female victims of murder in Eskişehir in western Anatolia were evaluated in this study aimed at assessing and discussing data related to the victims and the murderers.

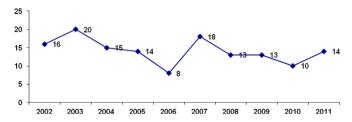
Eskişehir is a city in north-western Turkey. According to the 2012 census, the population of the city is 781,247. Eskişehir is known as a university town and one of Turkey's foremost industrial cities.

2. Materials and methods

After a legal process and the results of the autopsies during 2002–2011 in Eskişehir, 715 subjects found to have died as a result of murder were chosen. After receiving the permission of the Eskişehir Chief Public Prosecutor's Office for the study, the forensic investigation files of the cases were evaluated. The study was finally conducted on 141 murdered women. Cases were evaluated in terms of their age, marital status, education levels, relationship to the murderer, reasons for violence, type of action and reasons for death.

Data were assessed with the Statistical Package for Social Sciences (SPSS) 16.0 package program.

Corresponding author. Tel.: +90 5052230885.
E-mail address: drkenankarbeyaz@hotmail.com (K. Karbeyaz).



Graph 1. Distribution of the cases by year.

3. Results

After a legal process and the results of the autopsies during 2002–2011 in Eskişehir, 715 subjects were found to have died as a result of murder and 141 (19.7%) of these victims were women. It was determined that all the murderers had been male. In the period between 2002 and 2011 in which the study was conducted, women were held responsible for five people's deaths. After the murder, women committed suicide in two of these cases; one woman committed suicide after killing her two children and another woman committed suicide after killing her husband and her child. In another case, the woman had been exposed to violence by her ex-boyfriend for a long time and she killed him by stabbing.

Approximately 14 women were murdered each year during the study period. A significant difference was not observed in the distribution of cases by year (Graph 1).

Distribution of the cases by age is shown in Graph 2. The mean age was 29.6 \pm 10.5 years with a range of 14–62 years. There were 19 cases (13.5%) that were 18 years old or younger.

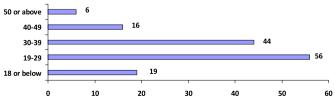
The marital status was 'married' in 79 cases (56.0%) and 'single' in 33 (23.4%). There were 10 married cases that were 18 years old or younger (Table 1).

The education level was primary school or lower in 68 women (48.2%), high school in 57 women (40.5%) elementary school and higher education in 16 women (11.3%).

The employment status evaluation showed that there were 69 (48.9%) housewives, 27 (19.1%) civil servants, 20 (14.2%) workers and 25 (17.8%) tradeswomen, self-employed or employees. There was no significant relation between the employment status of the women and their relationship with the murderer (Table 2, P > 0.05).

The murderer was the husband in 68 (48.2%) and ex-husband in 11 (7.8%) of the victims. It was also detected that out of 19 underaged women who had died as a result of murder, 10 women had been married and their murderers were also their husbands. Distribution of the murderers' relationship to the victim by age group is shown in Table 3.

The reasons presented by the murderers before the court are shown in Table 4. The most common reason was the woman's request for divorce or breaking up (n=40, 28.4%). Severe conflict and a history of violence were detected in cases where the murderer was the husband or ex-husband. There was a record of violence for 15 (10.6%) female victims of murder before they were



Graph 2. Distribution of the cases by age group.

Table 1 Distribution of the age groups by marital status.

Marital Status	18 or below		19 or a	above	Total		
	N	%	N	%	N	%	
Married	10	52.6	69	56.6	79	56.0	
Single	9	47.4	24	19.7	33	23.4	
Divorced	_	_	26	21.3	26	18.5	
Widowed	_	_	3	2.4	3	2.1	
Total	19	100.0	122	100.0	141	100.0	

killed while no such record existed for the remaining 126 (89.4%) cases. It was ascertained that seven women (5.0%) had been pregnant in case of the murder. All the pregnant women assessed in this study had been killed by their husbands.

The women were most commonly killed with a sharp object (n = 63, 44.7%), followed by firearms (n = 50, 35.4%). The most common reasons of death were haemopneumothorax and injury of the lungs and heart (n = 70, 49.6%) (Table 5).

4. Discussion

Men are murdered more frequently than women. A study from USA reported that men became victims of murder 6.2 times more frequently than women. A study conducted between 1997 and 2001 in Adana, Turkey, found that 19.7% of all murder victims were women during that period.² We found that 19.7% (n = 141) of the murder victims in our city during a 10-year period were women. A study from England found that 37% of the female and 6% of the male murder victims were killed by their spouses.¹⁸ Murders committed by women are also outcomes of violence against women. 18-20 All the murderers in the present study were male. We found that approximately 14 women had been victims of murder per year in the 10-year period between 2002 and 2011. On the other hand, women were held responsible for five people's death in three cases within the same period. In two cases, women murdered their husbands and then committed suicide: one committed suicide after killing her two children and the other committed suicide after killing her husband and a child. In the remaining case, which was not a suicide, a woman had always been exposed to violence by her ex-boyfriend and she killed him by stabbing. These data indicate that murders committed by women are also the result of violence against women.

Murder of women is the worst result of violence against women. 6.21–24 Women are exposed to violence all over the world although there are plenty of studies and projects on this issue. This violence may sometimes result in the woman's death. 5.6.21.22 Studies conducted on women who were victims of murder show that they are generally killed by their relatives and in particular by their husbands. A study from USA on spouse murders reported that 1.6 of 100,000 marriages ended up with the murder of a spouse. 23 Another study from USA found that just 20% of the female victims of murder had been killed by someone not closely known to the

Table 2Distribution of women's employment status by victim's relationship with murderer.

Occupation of women	Killer					Total	
	Husband/ex-husband		Others				
	N	%	n	%	n	%	
Housewife/not working	44	55.7	25	40.3	69	48.9	
Working	35	44.3	37	59.7	72	51.1	
Total	79	100.0	62	100.0	141	100.0	

 $[\]chi^2 = 3.28 P > 0.05$.

Table 3Distribution of murderers' relationship by age group.

Closeness of murderer	18 or below		Over 18		Total	
	N	%	N	%	n	%
Husband	10	52.6	58	47.5	68	48.2
Ex-husband	_	_	11	9.0	11	7.8
Boyfriend, ex-boyfriend	7	36.9	21	17.2	28	19.9
Sibling	2	10.5	9	7.4	11	7.8
Father-in-law, brother-in-law	_	_	3	2.5	3	2.1
Relative	_	-	11	9.0	11	7.8
Foreigner	_	_	9	7.4	9	6.4
Total	19	100.0	122	100.0	141	100.0

woman.²⁴ It was reported that 58% of women murdered between 1997 and 2001 in Washington, USA, had been murdered by their husbands or boyfriends.²⁵ The World Health Organization reported that 70% of female victims of murder had been killed by their partners.^{5,17} In the present study, the murderer was the husband of the victim in 68 cases (48.2%), an ex-husband in 11 cases (7.8%) and a boyfriend in 28 cases (19.9%). Just nine cases (6.4%) were determined to have been killed by someone not closely known.

The youngest female victim of murder in our study was 14 years old and the oldest 62 years old, with a mean age of 29.6 \pm 10.5 years. It is reported that violence against women and murder of women are most commonly observed in the age group of 20–29 years. 18,19,25

Today, one of the most serious social problems of underdeveloped and developing countries is polygamy. In order to lessen the degree of their poverty, poor families in these countries make their daughters get married to older men. These children are generally exposed to physical, sexual and psychological violence. Some of these children commit suicide. Moreover, some of them are murdered by their husbands. $^{26-29}$ We found that 79 (56%) of the female victims of murder in our study were married and 33 (23.4%) were single. There were also 10 married females aged 18 years or less (Table 1).

Studies evaluating women killed by their husbands have reported higher rates from underdeveloped and developing countries with the most common reasons being jealousy and a request for divorce. ^{21–23} In the present study, the reason for murder was a request for divorce in 40 (28.4%) and jealousy in 23 (16.3%). We believe these reasons are associated with the murderer's attempt to show the crime as a normal event before the court. Jealousy as a reason for murder is socially acceptable in male-oriented countries.

Even pregnancy cannot prevent violence against or murder of women. ^{13,15,21} There were seven (5%) pregnant women in our study and all had been killed by their husbands.

Table 4Distribution of the reason provided by the murderer before the court to the relationship with the murderer.

Reason provided by the		derer	Total			
murderer before the court	Husband ex-husbar		Others			
	N	%	n	%	n	%
Jealousy (claim of cheating)	23	29.1	_	_	23	16.3
Financial reasons	15	19.0	_	_	15	10.6
Severe conflict, fight, disagreement	28	35.4	1	1.6	29	20.6
Woman filing a lawsuit/stating a request for breaking up	12	15.2	28	45.2	40	28.4
Moral laws	1	1.3	14	22.6	15	10.6
Other	_	_	19	30.6	19	13.5
Total	79	100.0	62	100.0	141	100.0

Table 5Distribution of the murder method and the injured body region.

Injured body	Murder	Total				
region	Blunt trauma	Throwing from height	Sharp object	Firearm	Suffocation with hands	
Head	16	1	0	21	0	38 27.0%
Thorax	1	2	50	17	0	70 49.6%
Abdomen	0	0	13	12	0	25 17.7%
Neck	0	0	0	0	8	8 5.7%
Total	17 12.1%	3 2.1%	63 44.7%	50 35.4%	8 5.7%	141 100.0%

Domestic violence creates a risk both for murder of women and for murders committed by women.²⁵ In other words, risk factors that cause domestic violence are the risk factors of murder of women too. One of the most important reasons of domestic violence is low socio-economical level.^{12,23,25} In our study, 44 (55.7%) of the 79 women murdered by their husbands and exhusbands were not working and did not have financial freedom while 68 (48.2%) women had an education of primary school or lower. Financial difficulties were the reason stated in 15 (19%) of the murders by husbands and ex-husbands. However, these data also indicate that murder of women, the most severe dimension of violence against women, cannot be explained just by low socio-economical level.

A sharp object or a firearm is most commonly used when women are murdered by their partners. $^{6,18-20}$ Similarly, a sharp object (n=63, 44.7%) or a firearm (n=50, 35.4%) had been used most commonly in our study. The most common reasons of death were haemopneumothorax and injury of the lungs and heart (n=70, 49.6%). Studies indicate that most of these murders are not premeditated. 21,22 Consequently, having a firearm at home is highly dangerous as it can be used during a fight. Murders committed with a firearm or a sharp object most commonly led to chest injuries. Other studies report penetrating chest injuries as the most common pathology resulting in the death of the victim in these murder cases. $^{30-34}$ Haemopneumothorax and injury of lungs and heart were also the most common reason for death in our study (n=70, 49.6%).

In conclusion, women are generally killed by their husbands and relatives as a result of long-term violence. Preventing violence against women and protecting women who are exposed to violence will be the most effective solution to prevent the murder of women. Enhancing women's status in the society, including women in the workforce and providing financial freedom to women, may all contribute to prevent violence against women. Preventing childhood marriage, still an important problem today, is essential in terms of hindering violence against women as well as creating healthy generations.

Women exposed to violence should be encouraged to apply to the state. The social rights of women who are victims of violence need to be protected by laws. There are relevant laws in our country but some shortcomings are observed in their application. When female victims file a complaint, they are not protected by the relevant institutions. Related studies are important in terms of both removing these shortcomings in application and changing the viewpoint of society towards violence against women. Highlighting these issues in visual and written media will make it easier for society to understand the importance of the issue. In addition, violence against women should be clearly explained beginning

from primary education and support should be provided for women to cope with such violence. Programmes for preventing violence against women of authorised legal organs, non-governmental organisations, universities and similar institutions should be supported and further steps should be taken.

One should not assume there are more murders of women in Eskişehir than other cities. There is no database comprising other cities and regions in our country regarding the same issue using the same method and equipment. Besides the gender of the murdered and the murderer, adding the degree of relationship into the judicial statistics published by Turkish Statistical Institute would contribute to creating more comprehensive data on this issue on a national level.

Ethical approval None.

Funding None.

Conflict of interest None declared.

References

- Velis E, Shaw G, Whiteman AS. Victim's profile analysis reveals homicide affinity for minorities and the youth. J Inj Violence Res 2010;2(2):67–74.
- Hilal A, Cekin N, Gülmen MK, Ozdemir MH, Karanfil R. Homicide in Adana, Turkey: a 5-year review. Am J Forensic Med Pathol 2005;26(2):141–5.
- 3. Sisti D, Rocchi MB, Macciò A, Preti A. The epidemiology of homicide in Italy by season, day of the week and time of day. *Med Sci Law* 2012;**52**(2):100–6.
- Krarup S. War surgery on Anholt 200 years ago. Dan Medicinhist Arbog 2011;39: 41–58
- Mohanty MK, Panigrahi MK, Mohanty S, Das SK. Victimiologic study of female homicide. Leg Med (Tokyo) 2004;6(3):151–6.
- Garcia L, Soria C, Hurwitz EL. Homicides and intimate partner violence: a literature review. Trauma Violence Abuse 2007;8(4):370–83.
- Vittes KA, Sorenson SB. Restraining orders among victims of intimate partner homicide. *Inj Prev* 2008;14:191–5.
- 8. Garcia-Moreno C, Heise L, Jansen HA, Ellsberg M, Watts C. Public health. Violence against women. *Science* 2005;**310**:1282–3.
- Thompson RS, Bonomi AE, Anderson M, Reid RJ, Dimer JA, Carrell D, et al. Intimate partner violence: prevalence, types, and chronicity in adult women. Am J Prev Med 2006;30:447–57.
- Asling-Monemi K, Tabassum NR, Persson LA. Violence against women and the risk of under-five mortality: analysis of community-based data from rural Bangladesh. Acta Paediatr 2008;97:226–32.

- 11. Herrera MC, Expósito F, Moya M, Houston D. "Having it all": women's perception of impact of female promotion on threat of domestic violence. *Span J Psychol* 2012;**15**(2):670–9.
- Woods SJ, Hall RJ, Campbell JC, Angott DM. Physical health and posttraumatic stres disorder symptoms in women experiencing intimate partner violence. J Midwifery Womens Health 2008;53(6):538–46.
- Heisse L. Violence against women; the hidden burden. World Health Stat Q 1993;46(1):14–22.
- 14. Shea CA, Mahoney M, Lacey JM. Breaking through the barriers to domestic violence intervention. *Am J Nurs* 1997;**97**(6):26–34.
- Douki S, Nacef F, Belhadj A, Bouasker A, Ghachem R. Violence against women in Arab and Islamic countries. Arch Womens Ment Health 2003;6:165

 —71. Tunisia.
- Haj Yahia MM. The incidence of witnessing interparental violence and some of its psychological consequences among Arab adolescents. *Child Abuse Neglect* 2001:25:885—907.
- 17. Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R, editors. World health report on violence and health. Geneva: World Health Organization; 2002.
- Aldridge ML, Browne KD. Perpetrators of spousal homicide: a review. *Trauma Violence Abuse* 2003;4(3):265-76.
 Salari S. Patterns of intimate partner homicide suicide in later life: strategies for
- Salari S. Patterns of intimate partner homicide suicide in later life: strategies for prevention. Clin Interv Aging 2007;2(3):441–52.
- Banks L, Crandall C, Sklar D, Bauer M. A comparison of intimate partner homicide to intimate partner homicide-suicide: one hundred and twenty-four New Mexico cases. Violence Against Women 2008;14(9):1065-78.
- Adinkrah M. Husbands who kill their wives: an analysis of uxoricides in contemporary Ghana. Int J Offender Ther Comp Criminol 2008;52(3): 296–310
- 22. Adinkrah M. Women who kill their husbands: mariticides in contemporary Ghana. *Aggress Behav* 2007;**33**(6):526–36.
- Mercy AJ, Saltzman EL. Fatal violence among spouses in the United States, 1976–85. AJPH 1989;79(5):595–600.
- Finlay-Morreale HE, Tsuei BJ, Fisher BS, Davis K, Johannigman JA. Close is dead: determinants of firearm injury lethality in women. J Trauma 2009;66(4):1207–11.
- Garcia L, Soria C. Homicides and intimate partner violence. *Trauma, Violence and Abuse* 2007;8(4):370–83.
- Neff LA, Broady EF. Stress resilience in early marriage: can practice make perfect? J Pers Soc Psychol 2011;101(5):1050-67.
- Wondie Y, Zemene W, Reschke K, Schröder H. Early marriage, rape, child prostitution, and related factors determining the psychosocial effects severity of child sexual abuse in Ethiopia. J Child Sex Abus 2011;20(3):305–21.
- Dahl GB. Early teen marriage and future poverty. Demography 2010;47(3): 689–718.
- Altindag A, Ozkan M, Oto R. Suicide in Batman, southeastern Turkey. Suicide Life Threat Behav 2005; 35(4):478–82.
- Bentley AJ, Busuttil A, Clifton B, Sibbald P. Homicidal tandem bullet wound of the chest. Am J Forensic Med Pathol 1997;18(1):56–9.
- 31. Verzeletti A, Astorri P, De Ferrari F. Firearm-related deaths in Brescia (Northern Italy) between 1994 and 2006: a retrospective study. *J Forensic Leg Med* 2009;**16**(6):325–31.
- Asfaw M, Aberra M. A prospective analysis of thoracic injuries in Harar, Hiwot Fana hospital. Ethiop Med J 2005;43(4):261-6.
- Bergeron E, Lavoie A, Razek T, Belcaid A, Lessard J, Clas D. Penetrating thoracoabdominal injuries in Quebec: implications for surgical training and maintenance of competence. Can J Surg 2005;48(4):284–8.
- Madhok BM, Roy DD, Yeluri S. Penetrating arrow injuries in Western India. Injury 2005;36(9):1045–50.